

10/721,038

(FILE 'HOME' ENTERED AT 16:00:53 ON 31 MAY 2005)

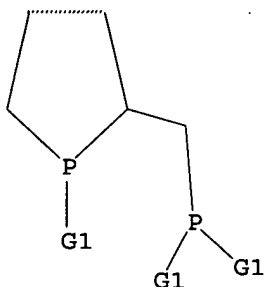
FILE 'REGISTRY' ENTERED AT 16:01:18 ON 31 MAY 2005

L1 STRUCTURE UPLOADED

=> d l1

L1 HAS NO ANSWERS

L1 STR



G1 Cb,Hy,Ak

Structure attributes must be viewed using STN Express query preparation.

=> s l1

SAMPLE SEARCH INITIATED 16:01:40 FILE 'REGISTRY'

SAMPLE SCREEN SEARCH COMPLETED - 256 TO ITERATE

100.0% PROCESSED 256 ITERATIONS

1 ANSWERS

SEARCH TIME: 00.00.01

FULL FILE PROJECTIONS: ONLINE **COMPLETE**

BATCH **COMPLETE**

PROJECTED ITERATIONS: 4161 TO 6079

PROJECTED ANSWERS: 1 TO 80

L2 1 SEA SSS SAM L1

=> s l1 full

FULL SEARCH INITIATED 16:01:47 FILE 'REGISTRY'

FULL SCREEN SEARCH COMPLETED - 5028 TO ITERATE

100.0% PROCESSED 5028 ITERATIONS

23 ANSWERS

SEARCH TIME: 00.00.01

L3 23 SEA SSS FUL L1

=> fil caplus

COST IN U.S. DOLLARS

SINCE FILE

TOTAL

ENTRY

SESSION

FULL ESTIMATED COST

161.33

161.54

FILE 'CAPLUS' ENTERED AT 16:01:54 ON 31 MAY 2005

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FILE LAST UPDATED: 30 May 2005 (20050530/ED)

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This file contains CAS Registry Numbers for easy and accurate
substance identification.

=> s l3
L4 4 L3
=> d 1-4 bib abs

L4 ANSWER 1 OF 4 CAPLUS COPYRIGHT 2005 ACS on STN
AN 2004:995769 CAPLUS
DN 141:424300
TI P-chiral phospholanes and phosphocyclic compounds and their use in
asymmetric catalytic reactions
IN Zhang, Xumu; Tang, Wenjun
PA The Penn State Research Foundation, USA
SO U.S. Pat. Appl. Publ., 41 pp., Cont.-in-part of U.S. Ser. No. 291,232.
CODEN: USXXCO
DT Patent
LA English
FAN.CNT 2

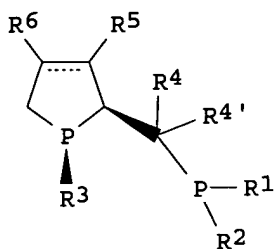
	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	US 2004229846	A1	20041118	US 2004-856014	20040528
	US 2003144137	A1	20030731	US 2002-291232	20021108
PRAI	US 2001-336939P	P	20011109		
	US 2002-291232	A2	20021108		
OS	CASREACT 141:424300; MARPAT 141:424300				
AB	Chiral ligands and metal complexes based on such chiral ligands useful in asym. catalysis are disclosed. The metal complexes according to the present invention are useful as catalysts in asym. reactions, such as, hydrogenation, hydride transfer, allylic alkylation, hydrosilylation, hydroboration, hydrovinylation, hydroformylation, olefin metathesis, hydrocarboxylation, isomerization, cyclopropanation, Diels-Alder reaction, Heck reaction, isomerization, Aldol reaction, Michael addition; epoxidn., kinetic resolution and [m+n] cycloaddn. Processes for the preparation of the ligands are also described. Thus, preparation of (1S,1S',2R,2R')-1,1'-di-tert- butyl[2,2']diphospholanyl TangPhos was prepared starting from 1,4-dibromobutane, PCl3, and t-BuMgCl and was used as cocatalyst with [Rh(NBD)2]SbF6 for asym. hydrogenation for dehydroamino acids.				

L4 ANSWER 2 OF 4 CAPLUS COPYRIGHT 2005 ACS on STN
AN 2004:473396 CAPLUS
DN 141:23728
TI Preparation of phosphine ligands as cocatalysts for asymmetric reactions
IN Osinski, Piotr; Pietrusiewicz, Kazimierz Michal; Schmid, Rudolf
PA Pol.
SO U.S. Pat. Appl. Publ., 29 pp.
CODEN: USXXCO
DT Patent
LA English
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	US 2004110975	A1	20040610	US 2003-721038	20031121
	WO 2004050669	A1	20040617	WO 2003-EP12980	20031120
	W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, UZ, VC, VN, YU, ZA, ZM, ZW RW: BW, GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ,				

BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE,
ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE, SI, SK,
TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG

PRAI EP 2002-26831 A 20021129
OS CASREACT 141:23728; MARPAT 141:23728
GI



I

AB The invention is concerned with the preparation of new phosphine ligands I (R1, R2 = independent of each other unsubstituted alkyl, aryl, cycloalkyl, heteroaryl, alkyl, aryl, cycloalkyl, heteroaryl each of which independently is substituted by alkyl, alkoxy, halogen, hydroxy, amino, mono- or dialkylamino, aryl, SO2R7, SO3-, CONR8R8', carboxy, alkoxy carbonyl, trialkylsilyl, diarylalkylsilyl, dialkylarylsilyl or triarylsilyl; R3 = alkyl, cycloalkyl, aryl, heteroaryl; R4', R4 = independent of each other H, alkyl, optionally substituted aryl; or R4 and R4 together with the C-atom they are attached, form a 3-8-membered carbocyclic ring; dotted line is optionally a double bond; R5, R6 = independent of each other H, alkyl, or aryl, R7 = alkyl, aryl; R8, R8' = independent of each other H, alkyl, aryl; the substituents attached by the bold bonds are in cis relation to each other); metal complexes with such ligands in asym. reactions. Thus, preparation of (1S,2S)-cis-1-phenyl-2-[(diphenylphosphino)methyl]phospholane (II) is given in several steps starting from 1-phenylphospholane 1-oxide. Rhodium complex of II catalyzed asym. hydrogenations is also given.

L4 ANSWER 3 OF 4 CAPLUS COPYRIGHT 2005 ACS on STN

AN 2003:396818 CAPLUS

DN 138:401901

TI P-chiral phospholanes and phosphocyclic compounds and their use in asymmetric catalytic reactions

IN Zhang, Xumu; Tang, Wenjun

PA The Penn State Research Foundation, USA

SO PCT Int. Appl., 70 pp.

CODEN: PIXXD2

DT Patent

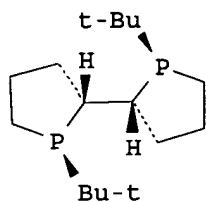
LA English

FAN.CNT 2

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 2003042135	A2	20030522	WO 2002-US35788	20021108
	WO 2003042135	A3	20031224		
	W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, OM, PH, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TN, TR, TT, TZ, UA, UG, UZ, VN, YU, ZA, ZM, ZW				
	RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG				
	CA 2466449	AA	20030522	CA 2002-2466449	20021108
	EP 1451133	A2	20040901	EP 2002-803182	20021108
	R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT,				

IE, SI, LT, LV, FI, RO, MK, CY, AL, TR, BG, CZ, EE, SK

JP 2005509012 T2 20050407 JP 2003-543975 20021108
 PRAI US 2001-336939P P 20011109
 WO 2002-US35788 W 20021108
 OS CASREACT 138:401901; MARPAT 138:401901
 GI



I

AB Chiral ligands and metal complexes based on such chiral ligands useful in asym. catalysis are disclosed. The metal complexes according to the present invention are useful as catalysts in asym. reactions, such as, hydrogenation, hydride transfer, allylic alkylation, hydrosilylation, hydroboration, hydrovinylation, hydroformylation, olefin metathesis, hydrocarboxylation, isomerization, cyclopropanation. Diels-Alder reaction, Heck reaction, isomerization, Aldol reaction, Michael addition; epoxidn., kinetic resolution and [m+n] cycloaddn. Processes for the preparation of the ligands are also described. Thus, Grignard reaction of $\text{BrMgCH}_2(\text{CH}_2)_2\text{CH}_2\text{MgBr}$ with PCl_3 in the presence of $t\text{-BuMgCl}$ in THF followed by thianation gave 1-tert-butylphospholane 1-sulfide which on BuLi/CuCl_2 -mediated coupling in presence of (-)-sparteine followed desulfurization with hexachlorodisilane/ C_6H_6 gave title phospholane, TangPhos I. $[\text{Rh}(\text{COD})_2]\text{BF}_4\text{-I}$ mediated asym. catalytic reactions are described.

L4 ANSWER 4 OF 4 CAPLUS COPYRIGHT 2005 ACS on STN

AN 2002:169604 CAPLUS

DN 136:232394

TI Preparation of optically active 2-(phosphinomethyl)phospholane derivatives as ligands for asymmetric synthesis catalysts

IN Kobayashi, Osamu

PA Foundation for Scientific Technology Promotion, Japan; Japan Science and Technology Agency

SO Jpn. Kokai Tokkyo Koho, 10 pp.

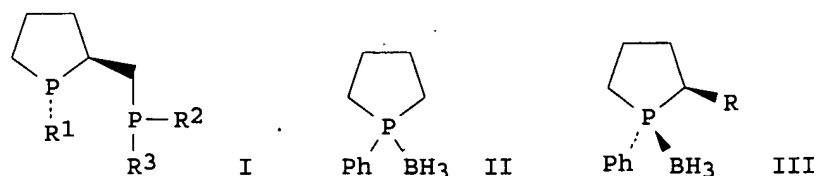
CODEN: JKXXAF

DT Patent

LA Japanese

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 2002069086	A2	20020308	JP 2000-256073	20000825
	JP 3537749	B2	20040614		
PRAI	JP 2000-256073		20000825		
OS	CASREACT 136:232394; MARPAT 136:232394				
GI					



AB The title compds. [I; R1, R2, R3 = (un)substituted hydrocarbyl; or R2 and

R3 are linked to each other to form a ring] are prepared, e.g. by (1) reaction of 1,4-dihalobutane (e.g. 1,4-dibromobutane) with metal (e.g. Mg) followed by cyclocondensation of the organometallic compound [e.g. Grignard reagent $\text{BrMg}(\text{CH}_2)_4\text{MgBr}$] with phenylphosphine and reaction with borane-THF complex to form 1-phenylphospholane-borane complex (II), (2) carboxylation of II and optical resolution to give 1-phenylphospholane-2-carboxylic acid-borane complex (III; $\text{R} = \text{CO}_2\text{H}$), (3) reduction of III ($\text{R} = \text{CO}_2\text{H}$) to 1-phenylphospholane-2-methanol-borane complex III ($\text{R} = \text{CH}_2\text{OH}$), (4) mesylation of III ($\text{R} = \text{CH}_2\text{OH}$) with methanesulfonyl chloride to mesylate III ($\text{R} = \text{CH}_2\text{OSO}_2\text{Me}$), (5) reaction of III ($\text{R} = \text{CH}_2\text{OSO}_2\text{Me}$) with diphenylphosphine in the presence of a base followed by reaction with borane-THF complex to give 2-(diphenylphosphinomethyl)-1-phenylphospholane-borane complex III ($\text{R} = \text{CH}_2\text{PPh}_2\text{-BH}_3$), and (6) removing borane from III ($\text{R} = \text{CH}_2\text{PPh}_2\text{-BH}_3$) to give optically active I ($\text{R}_1 = \text{R}_2 = \text{R}_3 = \text{Ph}$).